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## COLMAN'S RURAL WORLD

NORMAN J. COLMAN, EDITOR.  
LEVI CHUBBICK, EDITOR.

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### THE NEW CENTURY'S OPPORTUNITIES FOR THE FARM.

Farm homes for the larger part are far from reaching the ideal life of the dreamer; yet it is not true that in the older settled sections of our land that the farms have finer barns, better residences, more tastefully adorned and elegantly furnished and with handsomer lawns than those of the farmers who began with the nineteenth century? Then hand labor was the rule and markets were far, far distant. Travel was by stage coach and letter postage was too expensive for the farmers to send much like angel's visits and while we recklessly toss these white winged messages into the waste basket, our great grand sires preserved them, and thus we are enabled in relic museums to read autograph letters of great statesmen of a century ago.

The fast mail, the telegraph and the telephone mean much to the farmer, and the farm home, as they put him in touch with market centers where the products of his farm are for sale.

Then the farmer of the new century has market advantages unknown or unthought of by his ancestors of a hundred years ago. Fruits were a drug beyond those required for family use. One actively engaged in farming 50 years ago told the writer that one fall about the middle of the century just passed into history the grapes were unusually fine and a large market basket of them was prepared and taken to Philadelphia for sale with other country produce. All day long a purchaser was sought. At the close of the market one woman consented to accept them as a gift if the farmer would bring them to her, she living two miles in the opposite direction he did from the market place. The grapes were home and to loss. Canning factories and cold storage have put a price on fruits undreamed of in those days. The hogs in those "good old times" were slaughtered annually and led to market when snow covered the ground. And soon the market was stocked. It is now somewhat difficult to gorge the great packing houses of the country; and palace stock cars and refrigeration enable farmers to market pork in July as well as in January.

The new century will demand farm products, but the people of this period will be fastidious and demand those of the highest grade. Let farmers ponder well the needs of the markets, and the facilities for transporting farm products, and of knowing the values of the same and then prepare to improve opportunities offered and the closing of the 20th century will give to the world farm homes all over the land that will even surpass the ones we are in fancy erect.

### THE OLEO MAKERS' STUFFED CLUB.

Our Ohio correspondent, C. D. Lyon, refers in his letter to a clipping from a Cincinnati paper which he sends us in which in big headlines it is told how the Grout bill is threatening a big industry, that of making oleomargarine; how it will paralyze a "growing and useful" industry; that "it is a large market for beef fat;" that "it (oleo) is intended to supply the laborer who may not afford creamery butter," and to tax it "out of existence would be unjust to that particular class of citizens." The live stock interests of the country are aroused, it is asserted, "because this new demand for fat has greatly stimulated the live stock market." "Oleomargarine is said to be absolutely pure and in no way hurtful," and so on and ad nauseam.

This whole ground has been gone over so often and the claims of the oleomargarine makers have been so completely answered that it seems hardly worth while to give the matter further attention—at least it would not if these people would confine themselves to the truth. But let us examine one of their favorite weapons—injury to the live stock business—and see if it is not simply a stuffed club. From official figures it appears that there were used in making the 91,222,200

Do our subscribers all understand that the RURAL WORLD is sent only for the time it is paid for? At our very low rates it is an imperative necessity to stop it when subscriptions expire. This rule applies to rich and poor alike. If you want to continue to receive its visits renew. If you like the paper, your neighbors would like it, if acquainted with its merits as you are. Therefore try to induce as many of them as you can to join in a club. We do not like to stop the paper to any one, but if the renewal is not made during the month named on the label pasted on your paper with your name, you will not get it the succeeding month. Thus if the label reads John Smith, Dec., 1900, and he has not renewed by the end of December, he will not get the issues for January, 1901. If he wants them he should promptly remit for them. The present issue is sent to some whose terms have expired, but it will be the last sent until renewals are received.

pounds of oleomargarine that were made in the United States during the fiscal year ending July 30, 1900, 24,691,769 pounds of oleo oil, or 28.32 per cent of all the substances entering into the composition of the goods. If, as is claimed by the oleo people, only the calf fat of the beef animal is used from which to get this oleo oil, and from 10 to 12 pounds of this is obtained from an average beef animal, it is evident that it would take about 2,000,000 head a year to supply this ingredient of oleomargarine; and as this oleo oil is worth on the market from 6 to 7 cents per pound, if the price of the 2,000,000 cattle from which this oil might be obtained were enhanced the full amount of the value of the oleo oil, this would be increased from 70 to 80 cents per head of cattle. But note that there were received at the Kansas City stock yards alone during 1900 about 2,000,000 head of cattle, enough to have supplied the 70 to 80 cents worth of oleo oil per head that was used in making 91,000,000 pounds of oleomargarine. If that 70 to 80 cents per head be divided up among all the cattle sold during the year in all the markets of the country, it will make a pretty small figure. Then, again, the oleo oil would have a market value of some sort even if there were no oleomargarine made; hence the amount credited to the increased price of cattle because of the oleomargarine industry must be reduced to the amount of that value. Cattle raisers, except to a very limited extent, and this mainly among the range cattlemen, are not opposing the Grout bill.

A similar statement of facts might be made in reference to the neutral lard that is derived from the hog. Now another fact right along this line. It is asserted that the Grout bill is pushed solely by and in the interest of the dairy industry; and yet 25.39 per cent of the ingredients of the 91,000,000 pounds of oleomargarine made in 1900 were dairy products—butter, milk, butter oil and cream—nearly as much material as was derived from beef cattle.

### THE MISSOURI AGRICULTURAL COLLEGE.

It may be that we are a stickler for what some will regard as a non-essential, yet we wish the management of the Missouri Agricultural College did not evince so strong an inclination to avoid the use of the name Agricultural College. Whether this be in accordance with a fixed policy, or merely an oversight, we do not know, but the fact remains that of late the name Agricultural College seldom appears in any official communication relative to the State University. This is clearly the case in "The News Letter" which is published by the University of Missouri for the purpose of furnishing items of interest regarding University affairs. For example, in the issue that has just come to hand, dated Jan. 1, we find as item of news headed "Missouri University Students in Chicago," and which states that "six students in animal husbandry at the University of Missouri attended the International Live Stock Exposition in Chicago recently," etc. Not a hint thus far or in what follows that these six students were from the Missouri Agricultural College, a fact of which we hope they are proud.

Another item states that "Prof. J. C. Whitten, who holds the chair of Horticulture in the University of Missouri, delivered an address before the annual meeting of the State Horticultural Society on 'Pruning Peaches.'" Prof. J. M. Steedman, entomologist of the Missouri Experiment Station, spoke before the same meeting on "An Entomological Trip to Old Mexico."

Both of these professors are members of the Missouri Agricultural College faculty and we guarantee neither is ashamed of the fact.

A somewhat grudging recognition of the existence of the Agricultural College is contained in the following, which appears in the report of the annual meeting of the State Board of Agriculture:

"J. A. Potts, Eugene Rhodes and C. P. Cook, the committee to examine into the affairs of the State Agricultural College, a department of the State University, reported, commending the work of that institution, and noting the gratifying increase in the number of students."

This examination, be it understood, is a

requirement of the law defining the duties of the Board of Agriculture and is limited to the Agricultural College and Experiment Station.

No other mention is made in this issue of "The News Letter" of Agricultural College affairs. In the issue preceding the one just quoted from, the Short Winter Course in Agriculture is referred to, announcement of which, it is stated, "has just been made by the authorities of the State University of Missouri." The existence of the Agricultural College is ignored in this and in other announcements pertaining to the college.

In fact, the name Agricultural College is used so seldom that it will be strange if we do not soon hear the farmers of Missouri asking if there is a State Agricultural College.

In the statutes of Missouri it is enacted as follows: "There is hereby established the Agricultural and Mechanical College and a School of Mines and Metallurgy, provided for by the grant of the Congress of the United States, as a distinct department of the University of the State of Missouri." This would seem to give the Agricultural College a sufficiently distinct existence to warrant the University authorities in speaking of it as such and not simply mentioning it under the name of the State University.

This may be a sort of "States Rights" doctrine, but we believe it to be good in law and sound in policy. If the farmers of Missouri are to be helped by the Agricultural College, they must be led to have an interest and pride in it, and this will not be possible if the college is to be an intangible something the existence of which there may arise a disposition to question. We stand up for the Missouri Agricultural College.

### A SHEEP-KILLING DOG.

Is Valued by Owner at \$50.

Editor RURAL WORLD: For six years we have been trying to raise sheep, penning them up at night and getting out of bed before sun up on bitter cold mornings to heat up milk for motherless lambs; in fact doing all we knew.

On Dec. 14 a cur dog belonging to a neighbor killed one sheep and mangled another so that it will die. The next morning at daybreak he killed another. My husband shot the dog. The sheep were ewes heavy with lamb. It was hard to see them lying there torn to death by a worthless cur. The rest of the flock are so frightened that they huddle together and will not eat. We are told this will cause them to lose their lambs.

Our little girl went to the barn lot before we knew it. I found her on the ground beside one of the sheep that had been raised a pet, saying between her sobs: "Please don't die, Cherry, and I'll give you all my nanas (bananas)."

The owner of the dog only asks \$50 damages. He is reported to have said that he thought the dog was as good as himself. "There are others" who agree with him.

Sheep farming can be done by women alone, and hundreds of them would take it up, were it not for sheep killing dogs. Mr. Heaton, you have suffered from the smaller vermin; let your pen help us who have suffered from the larger.

### MARY SHAW.

Jefferson Co., Mo.

The foregoing but one of hundreds of similar recitals of sheep raisers' experience which each year unfolds. How long, Oh! how long will it be before the lawmakers of Missouri will ignore the duty they owe the sheep owners who, though comparatively few in number, are among the most worthy people of the state, and consider only the dog owners among whom are many of the least worthy, but who have votes?

As is seen in the case before us, not only is there a lack of legal protection for the sheep flocks of the state, upon which their owners pay taxes, from the depredations of dogs upon which no taxes are paid, but the owners of the curs have the effrontery to say to sheep owners that if they give their flocks shotgun protection the dog owners will demand the payment of \$50 for every non-tax-paying cur that is shot while killing sheep that are taxed by the state. Cannot statesmen evolve a better state of affairs than this?

Missouri, as is admitted by all who know the state and understand the requirements of the sheep industry, is admirably adapted for sheep husbandry. The business, under proper conditions, is profitable to those engaging in it, beneficial to the land and of the utmost importance to all the people in that the products are one of the best of foods and one of the most valuable materials from which to manufacture clothing. And yet, instead of having 5,000,000 head of sheep in Missouri, with a value of at least \$15,000,000, there are less than 600,000 head, valued at less than \$2,000,000, and the number is growing smaller each year, owing largely to the ravages of dogs and the risk of loss from this cause.

WILLIAMS CO., ILL.—We live 110 miles southeast of St. Louis, in a good farming and stock raising and mining section. Stock of all kinds is bringing good prices. We are having a very fine winter, no cold weather yet. Fruit does well here and the prospect for the coming crop is good, but we need more men here who will engage in fruit growing. Land is cheap—\$10 to \$25 per acre.

LEVI FERRELL.

### NOTES FROM AN OHIO FARM.

Editor RURAL WORLD: December 31, 1900, 6:30 p. m., the last day of the nineteenth century. The two oldest boys have gone to the county seat, four miles away, to a watch meeting. It has rained hard all day and kept me from going to an institute 30 miles away in adjoining county. I got to-day's Cincinnati paper an hour ago, and it reports a severe cold wave on the way, so I will have a bitter drive of 17 miles to-morrow afternoon to an institute in the northern part of my own county. We have a two days' meeting there, and from there Prof. Gibbs of the O. S. U., and the writer, 40 miles east to hold an independent institute on Jan. 4-5. Our meetings average 400 attendance at each of the five usual sessions.

THE GROUT BILL.—To-day's paper contains quite a labored effort, by some "space writer," against this bill. The article is elaborately headlined. The second sentence in it ends with a barefaced lie, and half a dozen other lies are scattered through it. At our institutes we are having the secretaries direct letters to our United States Senators stating that "—hundred—county farmers, in institute assembled, request you to use your influence and vote in favor of the Grout bill taxing oleomargarine." The plan was mine, and in all the meetings where it has been adopted there has not been a dissenting vote.

I venture the assertion that the resolution above mentioned would not have a dissenting vote at a single institute in Ohio, and if our senators disregard the will of the people as therein expressed, they deserve to be kicked out of the senate chamber.

THE CONSTITUTION.—Our lawmakers do not hesitate to stretch their consciences or the constitution either, when the fate of some pet measure of their own hangs in the balance, but when some measure of interest to the "common people" comes up they hide their heads behind that ancient document and cry "unconstitutional."

POYATERS IN THE SOUTH.—Let me say to C. N. Grotenburg that the best crops of potatoes I have ever seen were grown by my brother, 151 miles due south of the Ohio river, on the Queen and Crescent railroad. He has had but one failure in 14 seasons, and makes from 175 to 200 bushels per acre. These potatoes are of the second early varieties planted on clover sod in April. Sometimes he hauls manure over the land during fall and winter, but at times he may be eaten by the Hessian fly larvae. Many fields of wheat appear dry and brown. Especially does this hold true of the earliest sown. The fate of the crop depends largely upon the action of the Hessian fly pest during the early summer. As the subject now appears, one would incline to pronounce the crop in great danger. Winter wheat does not average very certain or profitably in this part of the state. At least this has become true in the recent dozen years. Perhaps our farmers might well change the winter wheat area to other products. Twenty or more years ago this valley and county was a good region for spring wheat, but insects and other conditions developed so destructively that the crop had to be abandoned. It is likely that if it were wisely followed the same fate would befall it.

BENEFITS OF AN OUTING.—It does a person much good to run away from home to new friends and scenes and different air. Sameness is wearing, and a change is the best tonic one can take. And the remedy is so easy and so pleasant, and the results are so dear. Why, new life is given, and we return to our homes and friends feeling so cheerful and rejuvenated. How happy! And the memories of the railway rides, the new scenes, new friends, and the nice things we see and hear. And what a study! And what a real joy! I often think of the many who never have the privilege of even going out of their own county. Especially do I sympathize with womankind who are thus restrained. Oh, my! the same home sights and same work nearly all the time, with but little change or relief! If I were wealthy, I would go around to those restricted home folks and pre-arrange them round trip tickets for \$50 to 1,000 miles, and I would say: Now, go and have a good time. Be happy, learn lots of good things, and grow broader and higher and sweeter. As I travel over the land in different states, I make a study of things. Farm buildings come in for consideration. I repeat that barns average too large for their practical utility. Too much space is never used. And a big, empty barn is not a very slightly affair. The thing should be adapted to its exact requirements. I don't favor a large barn for mixed uses. I would prefer having implements to themselves, likewise most of the corn. The danger of fire is suspended only a few feet above a barn containing all kinds of inflammable materials. I would prefer things classed in their respective coverings.

Clark Co., Mo. JASPER BLINES.

WHEAT PROSPECT.—In Clark county the winter wheat prospect is suspended by a single hair which may be eaten by the Hessian fly larvae. Many fields of wheat appear dry and brown. Especially does this hold true of the earliest sown. The fate of the crop depends largely upon the action of the Hessian fly pest during the early summer. As the subject now appears, one would incline to pronounce the crop in great danger. Winter wheat does not average very certain or profitably in this part of the state. At least this has become true in the recent dozen years. Perhaps our farmers might well change the winter wheat area to other products. Twenty or more years ago this valley and county was a good region for spring wheat, but insects and other conditions developed so destructively that the crop had to be abandoned. It is likely that if it were wisely followed the same fate would befall it.

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WINTER DAYS AT SEVEN PINES.

Editor RURAL WORLD: In northeast Missouri the year 1900 was remarkable in several respects. Especially true is this in regard to meteorology. The month of August broke the records for August during the 30 years' history of the United States Weather Bureau. From the 1st to the 15th inclusive, the temperature ranged above 90 degrees without a break; and during the entire month the reading was above the 90 point for 25 days. This brought the mean daily temperature up to 83 degrees, against the mean average of 77 degrees. From July 1st to September 5th there was more heat in the United States than ever recorded in a like time. The year's excess of temperature was 77 degrees, and the total amount of precipitation was 33.71. This is a little below the average annual rainfall. With this great heat and shortage of moisture, our counties harvested a pretty fair average in corn. The month of December was pretty dry, having only one-fourth inch of rainfall.

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with a veteran breeder who was infected with the "breed young for early maturity" craze, and I incurred his everlasting enmity by opposing his ideas that animals should be bred before they were nearly grown. A few weeks ago I met a man at the State Grange, who had been present at one of our meetings, and he told me that he had fully tested the theory of breeding immature animals, and had, at great cost, proved it a fallacy. Such breeding is a violation of all laws of nature, in spite of the claims of its advocates that "nature places no restrictions upon breeding," and in a natural state all animals breed at will. This is true, yet nature only aims at reproduction of species, and the survival of the strongest is nature's only effort at improvement. As a rather bluff old friend put the matter, when showing some apples, "This," said he, showing a wild crab, "is one of the Almighty's apples, and this (a Grimes' Golden) is one of Mr. Grimes' improvements on it." He meant nothing irreverent, but plainly illustrated the power of man to select from, and improve on, nature's work.

DOGS.—I sympathize with our old friend Judge Miller in the loss of that grape vine, from the jaws of that dog. A neighbor keeps two dogs; he also keeps 30 fine Shropshire ewes. The other morning he found 21 of them torn to pieces by dogs—of course his own had nothing to do with the job. Mine was in the hen house that night, another neighbor's followed the children to church and was locked in over night; another dog was tied up; so he went to the treasury of the county and collected \$80 for damage done by dog or dogs unknown. If on to-morrow morning, the dawning of a new century, every dog could be found stiff in death the world would be better off.

C. D. LYON.

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COW PEAS IN JERSEY CO., ILL.

Editor RURAL WORLD: This section was in 1830, and many of the farms, even of those of a much later date, are in need of some renovating crop. Raising cow peas is a new enterprise here. The whippoorwill pea yields well on poor land; so the poor land furnishes the seed peas for the community at large. HOW TO THRESH.—The question is how to thresh. I think nearly all of the threshing machines have tried to thresh the peas, and one cornshredder was tried, but in most cases the peas were badly split—one-third to one-half. One machine failed to separate two-thirds the peas from the straw. One machine did fairly well. We expect to raise a large crop the coming season, and if any RURAL WORLD reader can give us a successful plan for saving the peas he will confer a great favor on my community.

N. M. LURBON.

Possibly Mr. Rogers, whose letter appears in this issue, can tell how to thresh peas.—Editor.

TEOSINTE. Visiting a friend last fall in Linn Co., Mo., he showed me a forage plant called Teosinte. He gets the seed from New York, but is unable to get any seed from his own crop. Why is that, when Linn County is not very far south of Onondaga Co., N. Y.?

Teosinte is one of the non-saccharine sorghums. We are not familiar enough with its habits of growth to say why it does not mature seed in North Missouri. Will those who have had experience with it tell what it has been?

### WEEK BY WEEK.

Editor RURAL WORLD: There is some stir among fruit men as to varieties. Here in Iowa there are those who have a cross for Russian varieties. I have never yet had the pleasure of beholding a Russian winter apple. I have some Russian fall apples, but even they are poor keepers. One variety of them, however, is the best flavored fall apple that I have. It is choice.

The agricultural college of this state seems to give preference to what are called experiment stations, which is simply another name for nursery men. They, when a new fruit promises well, exploit it at prices which, to say the least, are extravagant.

I submit that the methods in vogue at a nursery are not those practiced on a farm, neither, indeed, can they be. Hence a plant may flourish grandly under nursery care and be a failure in the farm orchard or garden. What time have I or the ordinary farmer to spend in coddling a tree? I would like to know. Hence viewing the practice of agricultural colleges in dispensing their favors, they should be useful to the farmers of the country and not alone to the nursery men.

The government dispensation of seeds to the general community is bitterly opposed by only one class, and their echoes, viz., the seedsmen. The reason for this opposition grows out of the fact that seedsmen believe that it abridges their sales. If the government dispensed only to seedsmen they would sing to themselves a delightful tune, and follow it up by a chorus of quadruple prices to the farmers. For my part I sincerely hope the authorities will visit with these gifts as many homes as ever before.

I am convinced that I pay more taxes, a good deal, than the average seedman, and these men how a stupendous howl because the government sends me occasionally a quarter's worth of garden and field seeds. I am persuaded that I have here schooled the opinion of the very great majority of farmers.

If it didn't hurt they wouldn't shed a tear. No, sir.

CROP ROTATION.—I read, in a paper a short time ago an article on the rotation of crops. The writer said one year to clover, three years to corn and then revert to clover one year, and as Marryatt says, "Um, and so on."

Now such advice, in my opinion, is impracticable as a rule. Firstly, clover seed costs too much, and in the second place, firstly, the stand of clover is often too poor. Then my experience leads me to say that one year in clover is not sufficient to do the ground much good. My practice has been to sow to oats and clover the first year, follow this by getting three crops of clover hay for the cattle and then to corn for at least three years. You can cut lots of clover hay to the acre, but after the hay is made let it stand and go to seed, seeding itself. After this it is very profitable pasture. If the ground be bare of snow during a portion of the winter the stock will clean it all up and be the better for it. These are my views on the subject of clover rotation.

In these ends the regular old-fashioned crops are the ones to raise. A neighbor of mine, an intelligent farmer, tried Kaffir corn a couple of years. But he told me that it did not justify. The land sown to timothy and clover paid far better; the hay was easier handled every way, and the stock wouldn't touch the Kaffir corn so long as the timothy and clover lasted. I presume that where timothy and clover cannot be raised Kaffir corn would be all right. I have myself fed sorghum tops and blades; the cattle would eat them, but slabs of brown-as-a-berry clover suited them much better; the cows give more and richer milk and the spring calves thrive upon it wonderfully.

E. B. HEATON.

Warren Co., Ia.

### COW PEAS IN JERSEY CO., ILL.

Editor RURAL WORLD: This section was in 1830, and many of the farms, even of those of a much later date, are in need of some renovating crop. Raising cow peas is a new enterprise here. The whippoorwill pea yields well on poor land; so the poor land furnishes the seed peas for the community at large. HOW TO THRESH.—The question is how to thresh. I think nearly all of the threshing machines have tried to thresh the peas, and one cornshredder was tried, but in most cases the peas were badly split—one-third to one-half. One machine failed to separate two-thirds the peas from the straw. One machine did fairly well. We expect to raise a large crop the coming season, and if any RURAL WORLD reader can give us a successful plan for saving the peas he will confer a great favor on my community.

N. M. LURBON.

Possibly Mr. Rogers, whose letter appears in this issue, can tell how to thresh peas.—Editor.

TEOSINTE. Visiting a friend last fall in Linn Co., Mo., he showed me a forage plant called Teosinte. He gets the seed from New York, but is unable to get any seed from his own crop. Why is that, when Linn County is not very far south of Onondaga Co., N. Y.?

Teosinte is one of the non-saccharine sorghums. We are not familiar enough with its habits of growth to say why it does not mature seed in North Missouri. Will those who have had experience with it tell what it has been?

Editor.

### AT THE AGRICULTURAL COLLEGE.

Editor RURAL WORLD: The Short Winter Courses in Agriculture at the Missouri Agricultural College opened last week under the most favorable auspices with good classes.

The schedule of lectures and practical demonstrations have been arranged as follows:

GENERAL FARMING.—The month of January and February will be devoted to stock judging, stock breeding, stock feeding, farm crops and manures and fertilizers. Special emphasis will be given to judging beef cattle. More than a hundred head of registered cattle and over 50 high-grade steers are on the college farm available for this purpose.

DAIRYING.—The month of March will be devoted to practical work in butter and cheese making under the personal direction of an experienced and successful dairymen, and in the judging, selection, feeding and management of a dairy herd. About 50 registered Jersey cows belong to the college, and nearly 100 Holstein cows on a dairy farm near by afford abundant material of the best sort for training of the judgment of students in selecting a dairy herd.

HORTICULTURE.—In the Horticultural Course January will be devoted to a study of the practical details of commercial orcharding, including the selection of the varieties, location of an orchard, planting, pruning, insect pests, fungous diseases, etc. February will be occupied with nursery work including a large amount of experience in budding, grafting and handling nursery stock and a "continuation of the study of insect pests and fungous diseases, together with landscape gardening. March will be devoted to vegetable work and floriculture including green house and hot bed forcing and open field methods.

All work is entirely practical and this opportunity to get up on the best up-to-date methods of handling stock, growing crops, fruit and vegetables is within the reach of all.

It is not too late to derive great benefit from one of these courses. A list of valuable prizes offered by the State Board of Agriculture, the State Horticultural Society and some private parties, should furnish strong incentive to high-class work. An illustrated pamphlet will be mailed upon application.

Columbia, Mo. H. J. WATERS, Dean.

### SOME INTERESTING FIGURES.

Editor RURAL WORLD: This being the last day of the year, the time for the annual round up, I find that during the year my fields have yielded as follows:

Red top hay and seed, 60 acres, Cr. \$47.25	
To harvesting and threshing .....	62.45
Net yield .....	\$87.70
Net yield per acre .....	7.







## HORTICULTURAL TALKS.

R. M. KELLOGG.

## CALIFORNIA FRUIT NOTES.

**CONVENIENT FRUIT PACKERS.**

The Pierce-Williams Company, South Haven, Michigan, are making a first-class quality of fruit- and vegetable baskets and boxes. These packages are very strong, light, convenient and attractive in form. Carefully and safely packing a shipment materially increases its value; but the packages sent out by this company are so neat and attractive in appearance that the fruit sent out brings better prices and sells more readily in market. If you are a shipper—large or small—write for their free catalog. You will get better returns if you pack properly.

## QUESTIONS

Lime or ashes placed around the tree will prevent the ravages of this insect. The

I did a little experimenting about cutting back peach trees that were injured by the cold wave of February, 1899, and will give the results to the readers of the RURAL WORLD. Of my peach trees 210 were three years old; 15 were six years old. From 212 trees I cut all limbs back to within 12 or 13 inches of trunk, leaving them from two to three feet high. This was done as soon as frost was out of the wood. Twelve trees I cut back into the second year's growth, about the time the leaves began to open, and one tree I did not cut at all. Of 54 trees, 60 failed to start any new growth. In the other trees the growth was so small that I consider them worthless. The remaining 152 trees made a remarkably fine growth and this last season bore a light crop of

WHERE TO KEEP HONEY.

then I carried them to their new location. By half-past 2 in the morning they were all moved. The next morning before the bees moved any I disfigured the surroundings by hanging old hives on the fence-posts all around, then removed all the old blocks which they formerly rested on, and then as soon as they showed any signs of flying I went at the hives with a club and beat the hives, and gave them a good shaking. I was sure that this was the reason that they had been removed from St. Louis or some seaport. Not a bee went back to their old location, for I left a weak hive behind, expecting to catch enough bees to build it up a little, but to my surprise it didn't build. The reason I wrote this, the text-books generously dissuade people from moving short distances only by degrees. But it can be done successfully the way I produced. I moved all the bees and everything which formerly surrounded them; and such things as can't be moved, endeavor to change their appearance as much as possible.—Progressive Beekeeper.

## “PRIDE OF NISHNA”

In "Gleanings" for Oct. 15 I see an interesting article from S. P. Culley on "Improvement of Red Clover and Bees," says J. N. Arnold; also your editorial on page 313, which I was interested in reading. The past eighteen years I have had some experience with red clover and bees. For eight years I had one apiary, and for three years two in a locality that was a level country with a deep black soil. When the weather was wet, grasses grew very large and heavy, and the clover was so thick that the bees were so deep that none but the Italians were ever seen working on them, and they never stored any surplus honey that I noticed. For nine years I have had my home apiary in a locality that is clay soil. Years ago it was a body of white oak timber, now farm land, and kept up by small grain and red clover. During these years the most of my surplus honey was from the clover. In this locality the tubs do not grow so deep, and the soil is a damp black soil. I have observed, also, that when the season was dry the bees would gather more red clover honey than

Address, J. R. RATEKIN & SON, Station A, Shenandoah, Iowa.

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**SEED CORN** THAT PAYS AT FARMERS PRICES. Don't fail to send 5 cents in stamps for 4 samples of the corn that was awarded gold medals at Omaha exposition, and a 40-page book "Hints on Corn Growing." The Iowa Agricultural College grew 46 bushels per acre that shelled 82 lbs. from 70 lbs. of ears. Many farmers are reaping this wonderful yield.

**J. B. ARMSTRONG & SONS, SHENANDOAH, IOWA.**

**SEEDS** Cow Peas, Whippoorwills

## RUPTURE Quickly and CURED

**THE 2803 LOCUST ST. ST. LOUIS**

in a wet season for a while, and give it a **CHINSENG**—Complete instructions for growing this

PLANTING—Complete instructions for growing this money-making plant sent for 10c silver. Seed \$1 per hundred. C. D. NUSBAUM, Jonesboro, Ill.

**WANTED**—Salesmen for cigars; new plan, quick sales, good business, big money.

**WANTED** sales, good business, big money.  
CONSUMERS' CIGAR CO., 634 So. 7th-st., St. Louis.

**60 VARIETIES** Strawberry plants, \$2.00 per 1000 and up. Send for Catalogue of Nursery Stock free. H. W. HENRY, LaPorte, Indiana.

give almost double the surplus other colonies would side by side. I have one colony that stored double the amount of any

**STARK TREES SUCCEED WHERE OTHERS FAIL.**  
 Largest Nursery.  
 Fruit Bushes. Result of 75 years' experience.

STARK BROS., Louisiana, Mo.; Danville, N.Y.

DAHLIA'S CENTENARY. — Florence, the city of flowers, is about to celebrate a floral centenary that of the dahlia.

**BIG APPLES**

**WE OFFER TRUE TO NAME.**  
375,000 Apple, Standard  
and Dwarf Pear, Cherry

that the tubers might prove a cheap food for the starving peasantry. Instead of

that, the beauty of its flowers attracted the attention of the rich, and in 1900 some

specimens were taken to Paris. From this time the dahlia became one of the glories

of European gardens. It also then first received a name, adapted from that of

Dahl, the leading botanist of the day, which was unselfishly suggested by one

of the original importers. The celebration will take the form of an exhibition of

ly dahlias, and it is hoped that the finest blooms of the world may be gathered to-

g. a- e-  
gether.

THOUSANDS OF HAPPY HOMES.

If anyone contemplates a change of residence, he should not overlook the at-

10 tractions and advantages of Utah. There are thousands of acres of splendid land

at various points on the line of the Rio Grande Western Railway in that state.

The soil is very productive and the market close at hand. The climate is superb.

being temperate the year round. The  
sugar beet industry as well as fruit cul-

sugar beet industry, as well as fruit culture, etc., are prominent features of these agricultural districts. Food products

Good, ripe extracted honey should weigh three pounds to the quart. It is

es Helms, General Passenger Agent, R. G. W. Ry., Salt Lake City, Utah. one-third heavier than water because of its density.

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## Live Stock.

Jan. 17-18-Combination Shorthorn sale at Kansas City. Noel N. Gallagher, Highland Station, Kan., and others.

Jan. 21-Dan Hollowell, Farmer City, Ill. Poland-Chinas.

Jan. 22-24 and 25-T. F. B. Sotham, Chillicothe, Mo., and others, at Kansas City.

Jan. 23-J. W. Funk, Heyworth, Ill. Poland-Chinas.

Jan. 24-E. Axline, Oak Grove, Mo. Poland-Chinas.

Jan. 25-Burgess Bros., Bement, Ill. Poland-Chinas.

Feb. 1-A. G. Woodbury, Danville, Ill. Poland-Chinas.

Feb. 4-E. H. Ware, Douglas, Ill. Poland-Chinas.

Feb. 6-7-Combination Galloway cattle, Omaha, Neb.

Feb. 6-F. W. and O. B. C. A. Novinger, Mo. Sale at Kansas City. Shorthorns.

Feb. 14-Ed. Burroughs, El Paso, Ill. Poland-Chinas.

Feb. 15-Frederick & Wycoff, Rowe, Kan. Shorthorns.

Feb. 16-Combination Berkshire sale at Kansas City. Shorthorns.

March 5-L. M. Monsees & Sons, Smithton, Mo. Jacks, stallions, mules and Poland-Chinas.

March 10-T. J. Wornell, Mosby, Mo. Shorthorns, Kansas City, Mo.

March 11-Abe Renick, Winchester, Ky., and E. Thomas, North Middletown, Ky. Sale at Kansas City. Shorthorns.

March 12-Gifford Bros., Manhattan, Kan. Shorthorns.

March 13-H. O. Tudor, Holton, Kan. Shorthorns.

March 20-B. O. Cowan, New Point, Mo. Shorthorn sale at Kansas City, Mo.

Mar. 27-Combination Galloway cattle, Chicago, Ill.

### HEREFORD SALE DATES AT KANSAS CITY, MO.

Jan. 15-16-Gudger & Simpson, Hereford.

Feb. 7-Steel Bros., Eagle & Son, Miller & Balch, and E. Corkins, Hereford.

Feb. 24-March 1-C. A. Stannard and others, Hereford.

April 2-4-Collin Cameron, Hereford.

Feb. 17-22-Armour and others, Hereford.

### SOOTHAM'S STAR LIST.

T. F. B. Sotham, Chillicothe, Mo., has issued in connection with the catalog of the Weavergrace breeding herd a "star list" that is a merit record of Hereford cattle, which to breeders of these cattle must prove to be of great value. In it is listed every prize winning animal recorded in the English Hereford Herd Book (30 volumes), and in the American Hereford Record (21 volumes). This list has doubtless cost Mr. Sotham a vast amount of labor. It will be highly appreciated by Hereford breeders.

### MEAT FOR THE RUSSIANS.

Chicago, Jan. 2-Signatures were affixed in this city yesterday to a great international contract and a Chicago packing firm will supply the Russian government this year with 1,600 barrels of a specially prepared meat to feed the soldiers of the Czar's army.

The terms of the contract will exceed \$100,000. The vast field for supplies in Russia and Siberia had been opened to Americans only lately, and it is believed that the contract completed yesterday is merely the predecessor of others which will amount to millions of dollars and result in the introduction and consumption of American packed meats in every part of the vast Northern Empire.

A new process of packing and pickling meat was an important factor in awarding the contract. By this process it is said that the problem of transporting the packed meat any distance and through any climate without affecting the quality of the supplies has been solved.

### PASTEUR BLACK LEG VACCINE.

The Pasteur system of preventive vaccination for black leg has been largely and successfully practiced in Europe ever since the discovery of the "vaccine" in 1884. Live stock vaccination was introduced into U. S. A. in 1895 by Harold Sproy, agent of the Pasteur Vaccine Co., and the remarkable success of the Pasteur Black Leg Vaccine is evidenced by the following figures:

Number of Cattle Treated in U. S. A.	With Pasteur Black Leg Vaccine.	Percentage.
1895	5,000	100
1896	2,800	10
1897	100,000	100
1898	100,000	100
Total	207,800	100
Usual Loss From Black Leg in Live Cattle Prior to Treatment With Pasteur Vaccine.		
1895	500	10
1896	2,800	10
1897	100,000	100
1898	100,000	100
Total	207,800	100
Loss From Black Leg After Treatment With Pasteur Vaccine.		
1895	50	1.00
1896	140	5.00
1897	520	0.52
1898	450	0.45
Total	1,170	0.46 (average).

All the cattle treated with Pasteur Vaccine were located in Black Leg districts, and therefore exposed to infection. The reduction of losses from the usual figure of 10 per cent to less than an average of one-half of one per cent is highly gratifying to those who have been wise enough to profit by the remedy placed at their disposal by the Pasteur Vaccine Co. A notable feature is the gradual reduction of mortality as the cattle owners gained greater confidence in Pasteur Black Leg Vaccine and understood that it was of practical and economical value, and not an "experiment." These results have been well established for some years past in Europe, but they are of particular interest to a number of American cattle owners who have unwittingly allowed the germs of Black Leg to take root in their pastures. The headquarters of the Pasteur Vaccine Co. are 43 Fifth avenue, Chicago.

The "Single" Vaccine (one application) is used for large bunches, but the "Double" Vaccine two applications being the best, is employed on small bunches and choice herds. The Pasteur Vaccine must not be confused with actual curing Catarrh. Send for testimonials free.

### CATARRH CANNOT BE CURED.

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and system. Hall's Catarrh Cure is not a quick medicine. It was prescribed by one of the best physicians in the country, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials free.

F. J. CHENEY & CO., Props., Toledo, O. Sold by druggists; 10c, 25c.

Hall's Family Pills are the best.



A BUNCH OF MARKET TOPPERS, sold at St. Louis National Stock Yards by Evans-Snyder-Buel Company.

THE CHAPMAN CATTLE.

In the RURAL WORLD of September 8, 1900, we spoke of a bunch of two-year-old steers that had been sold at the St. Louis National Stock Yards the week previous and that had topped the market at 6 cents, bringing an average of \$7.35 per head. An effort was made to secure an engraving of a photograph of the cattle, but this was at that time a failure. The Evans-Snyder-Buel Company, the

### CATTLE FOR THE FARMER.

We present below an extract from a paper read by Prof. Thos. Shaw at the annual meeting of the Minnesota Live Stock Breeders' Association, January 8, 1901.

This paper will not for one moment discuss the question as to whether the farmer should grow cattle or not upon his farm. To farm without live stock is so completely at variance with the proper maintenance of fertility that such farming will not even be considered here. On the assumption that every farm in Minnesota should have upon it its quota of cattle, the question to be considered is what kind of cattle shall be kept. This question cannot be answered with too much care, since on its determination will depend to a large extent the measure of the success that will attend the keeping of cattle upon the farm.

ADAPTABILITY TO NATURAL CONDITIONS.-The adaptability of the breed to be chosen to the natural conditions of the farm is the first thought that should engage the attention of the farmer. His natural tastes should unquestionably be made subservient to this idea. If those natural tastes are in accord with the natural conditions of his farm, it will be strange, indeed, if he does not succeed. If they are not, then it is almost certain that failure will follow any attempt that he can make to introduce a breed into a locality where the environment is not suitable and where possibly it is even at variance with the needs of the animals thus chosen.

NO GREATER MISTAKE is made by the average farmer who grows cattle than the little consideration that is given to adaptation; with the many, the paramount question is, which is the best breed. It ought to be, which is the best breed for my conditions. It may be possible for a man to change or modify adaptation in a breed, but to do that will take generations of careful breeding and feeding. But why should the energies of a man's life be thus expended on the modification of a breed, when one of the many breeds now in this country will exactly meet the needs of the farmer? Life is too precious to waste it thus.

ON LEVEL, RICH GROUND.-Wherever the land is level in character, the soil rich and fodder and grain production is abundant, the large breeds of cattle can be maintained under such conditions with the highest profit. It may not be easy to verify such an assumption by the actual demonstration. That large breeds, however, are usually kept under such conditions is at least a presumptive proof that the farmers have found them more profitable than the small breeds. It is also highly probable that large animals, under the conditions named, can be relatively more cheaply maintained than small ones. For instance, suppose one cattle head large as in size produces as much as two small animals, especially in a cold climate, since more food will be consumed in driving the machinery of two living organizations than in driving the machinery of one with equal capacity to the two. A large breed will be the best, therefore, for such conditions, other things being equal, whether combined meat, milk or other products.

ON ROUGH, THIN LAND.-Suppose, however, that the farm is mainly composed of rugged land, similar to that which forms the bluffs along the Mississippi, and that the soil is light. The production on such land will not be nearly so abundant as on the level and high prairie farm. It would be a mistake to introduce a ponderous breed on such a farm. A light breed, that readily climbs the bluffs and gathes food, whereas a ponderous breed, like the Shorthorn, could succeed only in carrying their heavy bodies over such land by labored effort; while, therefore, the former, a small breed, would almost certainly succeed well under such conditions, the large breed would not prove a success.

ON MEDIUM LAND.-Then again, there are farms that are intermediate in character. They have pastured lands upon them that are undulating and in some instances hilly. They also have upon them level stretches, where plentiful food supplies may be grown with which to sustain them in winter. Here, then, are conditions suited to the maintenance of the intermediate breeds, as for instance, the Red Polls or the Ayrshires.

WIRE PROTECTION cannot be furnished, the natural hardihood of the animal is an important factor. But under farm conditions, it is not so important relatively, since that measure of protection can usually be furnished, suited to the needs of the breed. It is not to be understood, however, that hardihood in breeds, even on the arable farm, is not an important consideration.

OUTLOOK is guaranteed to cure granular, inflamed or sore eyes. Treatment postpaid 10c. THE OUTLOOK REMEDY CO., St. Louis, Mo.

JNO. T. WATSON, Judson, Mo., writes: My Aberdeen-Angus cattle are wintering in fine shape. I have 15 head of the best young bulls I have ever offered to the trade; there is not one in the lot but what is good enough to head the best breeding herds of the country, and they are priced so any one can afford to use them.

ST. LOUIS NATIONAL STOCK YARDS.

Market Report Furnished by Evans-Snyder-Buel Company.

RECEIPTS for week ending Jan. 5 were 14,282 cattle, 40,000 hogs and 5,333 sheep, against 6,013 cattle, 21,156 hogs and 888 sheep the previous week. The receipts show an increase of 8,269 cattle, 18,844 hogs and 4,445 sheep. As compared with the week year ago cattle increased 3,900, hogs decreased 11,000 and sheep increased 3,000. Receipts at the four principal markets for the week amounted to 8,900 cattle, 20,900 hogs and 7,200 sheep, against 7,000 cattle, 21,100 hogs and 4,300 last week. In corresponding week year ago 18,700 hogs and 98,000 sheep were received.

Our market opened this week 10 to 15c higher than the close of last week. There were no strictly choice cattle offered for sale, but several bunches of pretty good cattle sold at \$5.20 to \$5.60. We note from the "Drivers" journal that the market declined there 15 to 25c towards the latter part of the week. Exporters were free buyers of cattle in their class. The run of low and better butcher cattle has been fairly liberal, and prices towards the latter part of the week show a 15 to 20c decline. Beef steers closed very weak and about 5 to 10c lower than the close of last week, while cow and heifer butcher figures 10 to 15c lower. Stocking steers have been very scarce, and best grades have been in strong demand, while common and inferior grades remain about steady. During week total veal calves sold as high as \$7.75. The bull market was about steady throughout, while best grades of milk calves were about strong, and medium grades were about steady. The following quotations are based upon present conditions of the market:

Best native beef steers, strictly fancy cattle, 1,300 to 1,600 pounds, averaged \$5.55; choice export steers, 1,300 to 1,500 pounds average, \$5.40 to \$5.60; good shipping and export, and medium grades, \$5.20 to \$5.35; fair to medium shipping steers, 1,300 to 1,450 pounds, \$4.70 to \$5.15; the bulk of the native beef steers averaging 1,300 pounds and upwards were of medium to good quality, sold at \$5.15 to \$5.40, and the top price was \$5.40 for fine 1,400 pound offerings. Steers, 1,200 to 1,300 pounds average, full range, rough to best, \$4.55 to \$5.20, bulk of sales at \$4.90 to \$5.30, and heavy 1,300 to 1,400 pounds, full range, \$4.25 to \$5.40, bulk of sales at \$4.50 to \$5.05; steers weighing less than 1,200 pounds full range \$3.25 to \$4.50, sold at \$4.00 to \$4.40. Feeding steers, fair to choice, 800 pounds and upwards, \$3.00 to \$4.50, the bulk at \$3.25 to \$3.50, and medium to good quality; common to choice stockers, \$2.25 to \$4.25, bulk at \$2.50 to \$3.50, and the quality was about steady. Choice native heifers sold at \$4.25 to \$4.90; good native cows and heifers sold at \$3.25 to \$4.10, and medium cows at \$2.75 to \$3.15; fair cows \$2.25 to \$2.70; inferior, light and old cows \$1.25 to \$2.25; the bulk of the Southwest cows sold at \$2.25 to \$3.15, and the bulk of all the cows sold at \$2.50 to \$3.50. Canning cows sold at \$1.25 to \$2.75. Veal calves, full range, \$4.00 to \$7.75 per 100 pounds, bulk at \$5.25 to \$7.25 per 100 pounds. Heifers and yearlings sold at \$1.25 to \$3.25 per 100 pounds with the bulk at \$2.00 to \$2.75. Bulls, full range, \$2.00 to \$4.00, bulk of sales \$2.75 to \$3.25. Stocker bulls sold at \$2.00 to \$2.25, the bulk at \$2.25 to \$2.75. Receipts in the Southern division amounted to about 311 cars, the largest in over a year, north 104 cars, and the total week 415 cars, or 209 cars, corresponding week last year. During the fore part of the week the market advanced, but later declined, and closed about practically about the same as steers and cows as a week ago. There have been a good many fed Texas cattle coming which have sold from \$4.00 to \$4.60. During the week Alabama and Mississippi calves sold at \$2.50 to \$3.00, bulls and oxen at \$2.50 to \$3.00, cows and mixed cattle at \$2.15 to \$3.00, largely a \$2.15 to \$2.35 and stockers and calves at \$2.15 to \$2.35. Butcher steers 850 to 880 pounds average at \$3.10 to \$3.60. Arkansas and Tennessee yearlings \$2.50 to \$3.00, bulls and oxen at \$2.50 to \$3.00, calves at \$2.75 to \$3.75 per 100 lbs., bulls, stags and oxen at \$1.75 to \$2.50, cows at \$2.00 to \$2.50, and heavy 1,300 to 1,400 pounds, full range, \$4.25 to \$5.40, bulk of sales at \$4.50 to \$5.05; steers weighing less than 1,200 pounds full range \$3.25 to \$4.50, sold at \$4.00 to \$4.40. Feeding steers, fair to choice, 800 pounds and upwards, \$3.00 to \$4.50, the bulk at \$3.25 to \$3.50, and medium to good quality; common to choice stockers, \$2.25 to \$4.25, bulk at \$2.50 to \$3.50, and the quality was about steady. Choice native heifers sold at \$4.25 to \$4.90; good native cows and heifers sold at \$3.25 to \$4.10, and medium cows at \$2.75 to \$3.15; fair cows \$2.25 to \$2.70; inferior, light and old cows \$1.25 to \$2.25; the bulk of the Southwest cows sold at \$2.25 to \$3.15, and the bulk of all the cows sold at \$2.50 to \$3.50. Canning cows sold at \$1.25 to \$2.75. 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You will be pleased with the results. It contains no opium in any form and is an expectorant it has no equal.

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Makes hogs tame. Once used always done. Has reversible (T-shaped) steel knife held by thumb screw, and self-adjusting to range to suit size of hog. Price, prepaid, \$1. W. I. SIBERT, P. O. Box 23, Lawton, Okla.

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**GILTS** Bred for April farrow at farmer's prices. W. P. Rock Eggs in season. R. S. Thomas, Carthage, Mo.

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stylish Chief for sale, by Old Chief No. 24; a good breeder. Also Bessie Turkey and Prince Duck; also fall pigs at reasonable prices. Write for prices. **HOGS & BIRDS**, Natick, Mass. Co., Ill.

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At very reasonable prices and of the best breeding. Registered stock. Write for prices. **J. H. WAGNER, Enfield, Illinois.**

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BIG 2 HERDS Duroc Jersey and Chester White Hogs. Top individuals. No screenings. Write for list of live prices. **R. S. THOMAS, Carthage, Mo.**

**Duroc Jersey and Berkshire Hogs!** Extra breeding. Satisfaction guaranteed or you may return at my expense. **S. O. WAGNER, Potosi, Mo.**

**S. G. RICHARDS, ST. LOUIS, MO.** Breeder of Duroc Jersey and Berkshire Hogs. Satisfaction guaranteed or you may return at my expense. **S. O. WAGNER, Potosi, Mo.**

**DUROC-JERSEYS**—70 head of pigs and sows, bred ready to ship. Satisfaction guaranteed. **H. B. SAWYER, CHERRY VALLEY, N. Y.**

**ROSE HILL HERD OF DUROC-JERSEY HOGS.**  
Choice gilt bred for early spring pigs, born ready for service, and a thrifty lot of Aug. and Sept. pigs for sale. **S. Y. THOMPSON, BLACKWATER, MO.**

**BERKSHIRES.**  
Large English Berkshires! 10 boys and 10 girls, bred to sire of second prize at the National Show. Write for prices. **LAUREL BREDING CO.**, St. Jacob, Ill.

**FOR ANGORA GOATS** write to G. W. FURBY, Viro, Oregon, Camanche Co., Texas.

**SHROPSHIRE RAMS,** all yearlings, for sale; also my stud ram for sale or trade for one as good. Address **L. G. JONES, Towanda, Ill.**

**MERINO SHEEP!** Both American and Delaine. Won more than all others at World's Fair and National Sheep Showings. 50 extra rams. **L. B. SELLER, St. Louis, Mo.**

**FOR SALE—80-Acre FARM.**  
60 acres in cultivation, 10 bottom, good school, and vineyard 1 mile from town. 1000 bushels of wheat, 1000 bushels of corn, 1000 bushels of oats, 1000 bushels of hay, 1000 bushels of straw, 1000 bushels of grain, 1000 bushels of feed, 1000 bushels of seed, 1000 bushels of stock, 1000 bushels of fruit, 1000 bushels of vegetables, 1000 bushels of other goods. **Address: Frankfort, Ohio Co., Mo.**

**FOR SALE—A farm of 300 acres** beautifully situated on Ohio River and near big river railroad. For particulars address **MR. ANGELO C. SAGBY, Olmsted, Illinois.**

**GET OUR FREE LIST of Farm Margins.**  
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**FOR SALE—100, 200 and 400 acres** of land in Eastern Kansas for exchange for merchandise. 100 acres to exchange for good horses. Describe what you have to offer. **S. B. Rohrer, LeRoy, Kan.**

**VIRGINIA FARMS FOR SALE.**  
Good land; neighbors, schools and churches convenient. Mild healthy climate. Low prices and easy terms. Write for particulars. **H. B. CHAMBERLAIN & CO., (Inc.), Richmond, Va.**

**FOR SALE!**  
Two first-class Benton County, Oregon River bottom farms, lying half a mile apart, and five miles from Warrenton, the country seat. Two hundred and thirty-six acres in one, and three hundred and twenty-three acres in the other. For particulars, price and terms, address **Wm. S. Shirk, Sedalia, Mo.**

**C. Madson, Edw. Coyle & Jos. B. Hensley**  
Have formed a partnership for the purpose of giving reliable information, maps, etc., to parties interested in the new opening in the Indian Territory. Mr. Madson has lived near the new opening for fifteen years and Mr. Coyle was born and raised within a few miles of the gate-way to the new country which is Bush Spring. Send one dollar for map, etc., to Madson, Coyle & Hensley, Refer to Bank of Bush Spring and Chicago Livestock Commission Co. of Kansas City, Mo.

## The Pig Pen.

A HOG EXPERIMENT.

Editor RURAL WORLD: I tried a little experiment in feeding hogs this winter. I had 15 head that I offered to sell the first of October for \$100. A neighbor offered me \$24. I concluded to feed them. Since then I have fed 100 bushels of corn at a cost of \$40, and small quantities of waste alfalfa hay. I have sold 10 for \$150, and the other five are worth at least \$60, making \$216 for the lot. This gives me \$76 profit over my own estimate of their original value, and \$22 over the estimate of my neighbor. But I never had hogs do so well before.

WM. HOWARD PHELPS.  
Kay Co., Okla. Ter.

WINTER CARE OF SWINE.

Corn fodder, clover hay or cane should be fed to hogs in the winter months as regularly as corn, says S. T. McIntosh in the "Breeder's Gazette." We think that shorts fed to hogs in self-feeders to prevent waste is much better than slops in cold weather. But few farmers have milk to make slop for 50 to 100 head of hogs. One hundred pounds of shorts mixed with water last 75 hogs but a few minutes. After drinking slop they will go to their bed wet and cold to lie there and shiver. The same amount of shorts fed dry to the same number of hogs will last them several hours. If shorts are fed in self-feeders, one-third to one-half shelled corn ground. They should have all the corn and clear water they want.

I have fed hogs this way, weighing at the beginning 100 to 150 lbs. per head, that gained three pounds per day. We use home-made self-feeders.

Our greatest success has been with hogs that ran to a spring branch with plenty of shade, blue grass and clover, but no stagnant water.

To have perfect success with sows farrowing, especially small gilts, put them in a pen by themselves two to four weeks before farrowing. Give plenty of room for exercise. Feed nothing but dry bran with pure water to drink. The smallest gilt fed this way will have no trouble in farrowing.

ALFALFA AND HOGS.

While Alfalfa has proved a wonderful crop for the western farmer, perhaps in no way can the plant be turned into good money more quickly than in hog-raising. The "Rocky Mountain Husbandman" says:

When the farmer can grow a pig in eight months that will bring him \$8 on the ranch and can feed such a pig on three-fourths steamed alfalfa and one-fourth cracked wheat, barley or peas, it seems to us that it is a paying proposition. Alfalfa will yield 4 tons of hay annually per acre, and wheat, barley or peas will yield 30 bushels per acre. We are not informed as to the number of pounds of feed that are necessary to produce such a porker, but we know this to be the cheapest ration in the calendar and are assured that it is a most successful one. The pig yields the quickest returns of anything in the shape of live stock that is produced on the farm. In our boyhood days pigs were not marketed frequently until 18 months old, and sometimes older, and were made to weigh very heavy. The writer remembers buying hogs for the market when an animal weighing less than 250 pounds, live weight did not go and the hog weighing 350 pounds was preferred. This is all changed now, and the lighter, nice animals are preferred. Now, 250 pounds, instead of being the minimum weight, is considered for 150 to 250 pound hogs are desirable. We believe these light hogs to be the most profitable to grow. They are made without a dollar's loss to the farmer. That is, the pig is kept growing right along, and as it grows older and its capacity for consumption increases, its rations are increased until it becomes a porker fit for market. The pig that grows into existence in the early spring is marketed in the early winter and nothing is lost by the inclemency of the weather.

PIG PEN POINTERS.

THE KANSAS CITY STOCK YARDS received last year 3,044,129 head of hogs, an average of 16,222 head a day. The average weight of these hogs was 215 pounds. The highest average weight of hogs received in any one month in 1900 was 220 pounds, in January; the lowest was in July, 208 pounds.

P. L. ORGAN, Carthage, Ill., breeder of Poland-China hogs of gilt edge pedigree and individual merit, has six gilts bred to farrow in March and April, 10 gilts four months old, and six males four months old, all extra nice, that he will sell very reasonably, quality considered, if taken soon. Write him for prices.

R. S. THOMAS, Carthage, Mo., writes: I have had a splendid trade and am sold out of W. P. Rock chickens; also Duroc Jersey male hogs. I have a few choice gilts bred for April farrow at farmer's prices. I have some extra good sows and gilts bred for March farrow for my own use, and expect to start the new century up to date. Change my advertisement. The only stock I have on hand to sell is bred gilts and W. P. Rocks eggs in season.

A HOG TAMER—If your hogs persist in tearing up your pasture don't buy any more rigs, but send \$1 to W. I. Short, Lewistown, Mo., for a Never Root Hog Tamer. It's a guaranteed article if used according to directions. It cannot be used as a dehorner, wood chopper or cow milker, but for faithfulness to perform the functions for which it is intended it stands without a rival. It prevents hogs from rooting, and is the only thing that will.

Mr. Roston Potter, Kingsley, Iowa, sold under date Jan. 12th, 1901: "Having been raising hogs for a quarter of a century, and experimenting with nearly all the hog remedies, I do not care to try to raise hogs any more without Snoddy's Hog Medicine."

**For HOG CHOLERA USE**

**The Snoddy Remedy.**

A Positive Cure and Preventive.

Only one Dr. J. H. Snoddy and one SNODDY REMEDY for Hog Cholera which is made only by Dr. Snoddy's picture is on each package. Beware of imitations and accept no substitutes for this one dollar booklet on Hog Cholera and strangles and testimonials about his remedy. Address:

**The Dr. J. H. Snoddy Remedy Co.,**  
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**The Snoddy Remedy.**

A Positive Cure and Preventive.



Our books, telling about composition of fertilizers best adapted for all crops, are free to all farmers. GERMAN KALI WORKS, 93 Nassau St., New York.

JOHN HEDGES & SON, Pana, Ill., write: We enclose you a change of our advertisement. Have sold out of hogs and have sold both of the fall, 1899, Hereford bull calves advertised in the RURAL WORLD, but have two good last spring bull calves to sell yet. Both were sired by Exile 6243, one of the very best sires of the famous old "Garfield," and one of the calves is out of "Lady Marble," by Prince Edward 7001, one of the "Lord Wilton's" best sons, and he is the sire of the dam of "Columbus," the sire of the great champion "Dale." Our sows are a choice lot and are bred mostly to the first prize state fair winners Chief Perfection, Jr. (one of the greatest boars of the Perfection family), and "Ideal Tecumseh," the best son of "Chief Tecumseh 34," the great Omaha winner and the sire of many state fair winners. A few of the gilts are bred to "Black S. S. Perfection," a choice pig rich in "Black U. S." blood. We never had a nicer lot of Barred and White Plymouth Rocks and Bronze and White Holland turkeys for sale than we now have. Our prices are very reasonable for the quality of stock that we are offering, and at our prices should be profitable for buyers.

Mothers will find "Mrs. Winslow's Soothing Syrup" the Best Remedy for Children Teething.

**The Shepherd.**

MISSOURI SHEEP BREEDERS' ASSOCIATION.

Norman J. Colman, President, 124 Chemical Building, St. Louis, Mo.

L. E. Shattuck, Secretary, Stanberry, Mo.

POOR SUCCESS WITH SHEEP.

Editor RURAL WORLD: I have tried raising sheep here, but have had poor success. I have lost 30 lambs and 20 old sheep during the summer and fall from stomach and other intestinal worms. I have tried the gasoline treatment recommended in a leading sheep journal, but find it an irksome task to administer, and I fear in many instances it injures the sheep. Nearly every owner of sheep in this part of the state has lost sheep during the past summer and fall, and unless something can be found to feed the sheep and lambs to prevent these troubles, rather than cure them, but few sheep will be raised in these parts.

Polk Co., Mo. W. J. COX.

PROFIT IN SHEEP.

There is an enormous loss occurring to farmers by reason of their neglect of the sheep. The feeding of sheep is the leading industry of all most prosperous countries of the world. England, Scotland, Germany, France, the United States, and Australia, Hungary and Spain, all base their agriculture on the sheep. Breeding sheep is the pivot of English husbandry, and it explains the fact that for hundreds of years past special breeds of sheep have been produced in various localities, counties, even, or as they are called in England, shires, such as the Shropshires, Lincolnshires and all the Down breeds, the Dorsets and Somersets, and the Kentish, the Leicesters, are all centers in the counties of these names, and with the sheep goes the culture of roots, rape and grass, all crops which enrich the land through the feeding of the sheep.

SHEEP AND WEED SEEDS.

A neighbor who has a nice little flock of grade Shropshire sheep came to our ranch in a great hurry a few mornings ago. He reported two of his fine yearling ewes dead and a third one sick. We found the trouble to be impaction of the stomach from eating too many weed seeds. These sheep had been running on green feed till the snow fell, which covered it, and they had to go on dry feed suddenly. He had fed them some screenings from the threshing machine and they got too much of it, which produced in the stomach the same state of things as smut eating does in cattle. A change of food for sheep appears to be the only remedy, as the sick die so quickly after the trouble is observed. Too much care cannot be observed in getting the flock from green feed to dry in the fall, and they should have plenty of clean water and salt to aid the digestion of the dry feed. The roughage at this time of year, too, should be the early-cut kind so as to be as tender as possible. These three young ewes were quite a loss in this little flock as the young ewes are the hope of the flock, and these were worth at least \$5 per head for mutton and more than that for breeding purposes, as they were choice.—Exchange.

Results at the College.—With a herd of twenty-eight cows, such as compose the herd of the average Kansas farmer, it was found that there were four, or fourteen per cent, that ran in debt for their feed, to say nothing about the other expenses of keep. If we charge each cow \$7.45 above cost of feed, as indicated above, twenty-five per cent of the herd would be classed as unprofitable cows. Not only does this twenty-five per cent run in debt for feed and labor, but greatly lowers the average income of the herd. This is shown in the following contrast of averages:

	Profitable	Unprofitable
Av. of herd.....	5,564	229.7
Av. of 21 profitable cows.....	6,306	267.3
Difference.....	651	27.5
From this comparison we see that, if the twenty-five per cent of unprofitable cows had been eliminated from the herd, the average yield of those remaining would have been increased 61 pounds of milk and 27.5 pounds of butter-fat per cow. The value of each cow's products would have been increased \$5.34, and the receipts (less cost of feed) would have been increased \$4.25. Deduct from the last column in each of the above averages \$7.45, the annual cost of keeping a cow outside of feed, and we have a profit in the case of the twenty-eight cows of \$5.37 per cow over and above all expense; but in the case of the twenty-one cows we have a profit of \$10.56 per cow, an increase of sixty-eight per cent. This shows not only that one-fourth of the college herd were absolutely worthless as dairy cows, but indicates how it is possible for a comparatively few poor animals to lower the average of the herd in a way to make it seem that all the cows are unprofitable.		

THE UNPROFITABLE COWS.—The picture of Zargola is a fair representative of the twenty-five per cent of unprofitable cows. She is not a bad-looking animal as far as individual appearance goes. She has a nice, straight back, a nearly straight underline, a thick, heavy neck and shoulders, with plenty of meat on her back; she has a very poorly formed udder, of small capacity; all of which goes to show that her dairy points are sadly wanting.

The yearly record of Zargola shows a production of 3,870 pounds of milk with test of 4.52 per cent, making a butter-fat yield of 167.5 pounds. The feed cost per pound of her butter-fat was 13.3 cents. In order to understand a little more

fully what is not wanted, and thus be better able to guard against objectionable features in selecting and buying cows, a rear view of this unprofitable cow is presented. Here it will be noticed that the hams are large and thick and meet each other for a considerable distance in the center. The udder is small and extends up but a short distance; in fact, there is very little room for the location of a successful milk record.

(Picture of Zargola will be found on page 2 this issue; rear view will be presented in a later issue.—Editor.)

THE AVERAGE COW.—In every herd there are undoubtedly many, if not a majority of the cows, that will fall under this head. Unless a man has been successful in grading up his herd, the average cow is neither so very good nor so very bad. She will yield somewhat of a profit, but not enough to make a person grow so very enthusiastic over the dairy business. Two illustrations of a representative of the average cow in the herd of the Kansas Agricultural College are presented (Zastona). The first one represents her shortly after arrival at the agricultural college, and betokens the fact that she is just in from the West (Lincoln Co., Kan.), and has doubtless experienced some of the warmth associated with a barb-wire fence when the winds and storms were sweeping down from the Dakotas.

With good feed and good care, the cow produced during the year 5,797 pounds of milk, which tested 4.53 per cent, making a butter-fat yield of 261 pounds. The feed cost of a pound of butter-fat is 12.8 cents. While making this record this cow also improved in her weight and physical appearance. At the commencement of her record she weighed 892 pounds; at the close she weighed 1,221 pounds—a gain of 329 pounds. It will be noticed that the underline of Zastona's body changes from an upward curve in the first cut to a downward in the second. Her improved

ment in appearance is shown in her second picture.

Like the unprofitable cow, Zargola, this animal also has a tendency to lay on fat. She has a good length of body but not a very deep paunch. Her udder is considerably longer than that of Zargola, but is very poorly formed in front. When viewed from the side, her udder appears like a funnel, with the fore teats attached to the side.

While the average cow in a herd is a profitable cow, and when crossed with a first-class bull of good dairy strain serves an admirable purpose in grading up a herd, still she must, in the eyes of an enterprising dairyman, be looked upon not as a permanent fixture but simply as a stepping-stone to something better.

THE CHOICE COW.—"Handsome is that handsome does" is the motto of the successful dairyman, and it often happens that the ugliest and boniest cow in the herd turns out to be the best milk producer.

(Continued on Page 8.)

**Pure Whiskey**  
Direct from Distiller to Consumer  
\$3.20  
FOUR Full Quarts, Express Paid.  
Saves Middlemen's Profit, Prevents Adulteration.  
For thirty-three years we have distilled the best whiskey made and sold it direct to consumers. We have thousands of customers and we want more. We therefore make the following Proposition:  
We will send you four full quart bottles of Hayner's Seven Year Old Double Copper Distilled Rye for \$3.20, Express Prepaid. We ship in plain packages—no marks to indicate contents. When you get it and test it, if it is not satisfactory return it at our expense, and we will return your \$3.20. Such whiskey cannot be purchased elsewhere for less than \$5.00.  
Representatives—State Nat'l Bank, St. Louis, Third Nat'l Bank, Dayton, or any of the Express Companies.  
WRITE TO NEAREST ADDRESS.  
THE HAYNER DISTILLING CO., 305-307 S. Seventh St., ST. LOUIS, MO. 226-232 West Fifth St., DAYTON, OHIO.  
P. O. Orders for Ariz., Cal., Colo., Idaho, Mont., Nev., N. Mex., Okla., Wash., Wyo. Must be for 24 qts., by freight, prepaid.  
We guarantee above firm will do as it agrees.—Ed.



ZASTONA.  
An average dairy cow at the time of entering college.

(Continued from Page 2.)

would be sold on the local market, minus cost of hauling. This, of course, does not include any fertilizing value, where the feed is consumed on the farm. Where common cows are fed a balanced ration and given practically all they will eat, the Kansas Agricultural College found that a herd of twenty-eight cows consumed an average of 2,350 pounds grain and 6,196 pounds roughness per cow per annum. At the prices prevailing in Manhattan during the year 1898-'99, the average cost of this feed was \$29.58.

But the cost of feed is not the only item to be considered. Labor is an important factor. In reply to a number of requests sent out by the Kansas Experiment Station to practical dairymen, asking for information upon the number of cows kept and the time it took to milk, feed, clean the stables, and wash milk utensils, it was found, on the average, that it took 125 hours per cow per annum. Figuring this time at the low price of ten cents per hour, it will cost \$12.50 per annum to care for a cow. The value of the dairy cow is at least \$60; the interest at eight per cent would amount to \$4.80. In averaging up a herd, account must be taken of the risk of failure of cow to breed and the loss of calves by death. In the absence of records on this point from dairymen, we will call this cost \$2.75 per annum, the estimated loss in raising beef cattle, as given by J. D. Gillette, the king of feeders of the last generation. We will assume that the calf is worth \$20; figuring eleven milk at fifteen cents per hundred pounds, grain at one-half cent per pound, hay at \$3 per ton, labor at \$2.75, we have found at the agricultural college that it will cost \$9 to raise a calf until it is six months old. Adding together the cost of labor, the interest on the money invested, the loss from the failure of the cow to breed, the

loss of calves by death, and the cost of raising the calf until six months old, we have a total of \$27.45. Subtract from this the value of the calf, and we still have \$7.45 charged up to the cow; that is to say, a dairy cow, to be really profitable, all things considered, must produce dairy products to the amount of \$7.45 above the cost of feed.

RESULTS AT THE COLLEGE.—With a herd of twenty-eight cows, such as compose the herd of the average Kansas farmer, it was found that there were four, or fourteen per cent, that ran in debt for their feed, to say nothing about the other expenses of keep. If we charge each cow \$7.45 above cost of feed, as indicated above, twenty-five per cent of the herd would be classed as unprofitable cows. Not only does this twenty-five per cent run in debt for feed and labor, but greatly lowers the average income of the herd. This is shown in the following contrast of averages:

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